Amend claim 2 to read as follows:

2. The method of claim 1 wherein said hybridized amplification probes are joined together by the action of [an enzyme] a ligase.

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Amend claim 3 to read as follows:

3. The method of claim 2 wherein said [enzyme] ligase is a thermostable ligase.

Amend claim 6 to read as follows:

A method for detecting an amplification product, having three or more ligated amplification probe segments, comprising:

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(a) contacting said amplification product with at least two detection probes, wherein at least one of said detection probes is labeled, and wherein each of said detection probes is complementary to a portion of [a different combination of] each of two of said ligated amplification probe segments which are adjacently situated in said amplification product;

(b) allowing each of said detection probes to hybridize to two adjacently situated amplification probe segments of said amplification product, with said detection probes binding to said amplification product in a contiguous manner to form a detection product;

(c) detecting the presence of said detection product through the presence of said label.

Amend claim 10 to read as follows:

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10. The method of claim 9 wherein said hybridized detection probes are joined together by the action of [an enzyme] a ligase.

Amend claim 11 to read as follows:

B3 11. The method of claim 10 wherein said [enzyme] ligase is a thermostable ligase.

Amend claim 14 to read as follows:

14. A method for detecting a target nucleic acid sequence which may be present in a test sample comprising:

(a) contacting said test sample with an excess of [a plurality of] at least three denatured pairs of nucleic acid amplification probes sufficient to drive the reaction forward, wherein the member probes of each of said pairs of amplification probes are complementary to each other and at least one same hybridizing member of each pair of probes is also complementary to an amplification sequence of said target nucleic acid sequence, said amplification sequence acting as a template sequence;

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(b) allowing said hybridizing members of said amplification probes to hybridize to said template sequence, with said amplification probes binding to said amplification sequence in a contiguous manner;

(c) ligating said hybridized amplification probes to form an amplification product, wherein each of said ligated amplification probes forms an amplification probe segment of said amplification product;

(d) effecting separation of said amplification product from said template sequence;

(e) repeating steps (a) through (d), wherein said amplification product also acts as a template sequence in subsequent cycles of steps (a) through (d);

(f) contacting said amplification product with at least two detection probes, wherein at least one of said detection probes is labeled, and wherein each of said detection probes is complementary to a portion of each of two of [a different combination of] said amplification probe segments which are adjacently situated in said amplification product;

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(g) allowing each of said detection probes to hybridize to two adjacently situated amplification probe segments of said amplification product, with said detection probes binding to said amplification product in a contiguous manner to form a detection product;

(h) detecting the presence of said hybridized detection product through the presence of said label.

Amend claim 16 to read as follows:

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16. The method of claim 14 wherein said hybridized amplification probes are joined together by the action of [an enzyme] a ligase.

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Amend claim 17 to read as follows:

17. The method of claim 15 wherein said [enzyme] ligase is a thermostable ligase.

Amend claim 20 to read as follows:

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20. A reagent for use in the detection of an amplification product, wherein said amplification product has three or more ligated amplification probe segments, said reagent comprising at least two nucleic acid detection probes, wherein wherein each of said detection probes is complementary to a portion of each of two of [a different combination of] said ligated amplification probe segments which are adjacently situated in said amplification product, with at

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least one of said detection probes being provided with a label, the detection probes being capable of hybridizing to said amplification product in a contiguous manner to form a detection product.

Amend claim 21 to read as follows:

21. A kit for use in the detection of a target nucleic acid sequence which may be present in a test sample comprising:

(a) an excess of [a plurality of] at least three pairs of amplification probes sufficient to drive the reaction forward, wherein the member probes of each pair of amplification probes are complementary to each other and at least one same hybridizing member of each pair of amplification probes is also complementary to a portion of an amplification sequence of said target nucleic acid sequence, said amplification sequence acting as a template sequence, and said amplification probes being capable of hybridizing to said template sequence in a contiguous manner [sufficiently adjacent to each other to enable the probes to be ligated to form an amplification product] having a gap of no more than one nucleotide between said amplification probes, such that said amplification product is made up of ligated amplification probe segments; and,

(b) at least two detection probes, wherein at least one of said detection probes is labeled, and wherein each of said detection probes is complementary to a portion of each of two of [a different combination of] said amplification probe segments of said amplification product which are adjacently situated in said amplification product, with at least one of said detection probes being provided with a label, said detection probes being capable of hybridizing to said amplification product in a contiguous manner to form a detection product;

Please add new claims 22-39, as follows:

22. The method of claim 14 wherein said amplification sequence is contacted with n pairs of amplification probes and said amplification product is contacted with n-1 detection probes.

23. The method of claim 22 wherein said amplification sequence is contacted with 3 pairs of amplification probes and said amplification product in contacted with 2 detection probes.

24. The method of claim 22 wherein said amplification sequence is contacted with 4 pairs of amplification probes and said amplification product in contacted with 3 detection probes.

25. The method of claim 22 wherein said amplification sequence is contacted with 5 pairs of amplification probes and said amplification product in contacted with 4 detection probes.

26. The method of claim 16 wherein said amplification sequence is contacted with n pairs of amplification probes and said amplification product in contacted with n-1 detection probes.

27. The method of claim 26 wherein said amplification sequence is contacted with 3 pairs of amplification probes and said amplification product in contacted with 2 detection probes.

28. The method of claim 26 wherein said amplification sequence is contacted with 4 pairs of amplification probes and said amplification product in contacted with 3 detection probes.

29. The method of claim 26 wherein said amplification sequence is contacted with 5 pairs of amplification probes and said amplification product in contacted with 4 detection probes.

30. The method of claim 17 wherein said amplification sequence is contacted with n pairs of amplification probes and said amplification product in contacted with n-1 detection probes.

31. The method of claim 30 wherein said amplification sequence is contacted with 3 pairs of amplification probes and said amplification product in contacted with 2 detection probes.

32. The method of claim 30 wherein said amplification sequence is contacted with 4 pairs of amplification probes and said amplification product in contacted with 3 detection probes.

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33. The method of claim 30 wherein said amplification sequence is contacted with 5 pairs of amplification probes and said amplification product in contacted with 4 detection probes.

34. The kit of claim 21 wherein n pairs of amplification probes are provided in combination with n-1 detection probes.

35. The kit of claim 34 wherein 3 pairs of amplification probes are provided in combination with 2 detection probes.

36. The kit of claim 35 wherein 4 pairs of amplification probes are provided in combination with 3 detection probes.

37. The kit of claim 35 wherein 5 pairs of amplification probes are provided in combination with 4 detection probes.

38. The kit of claim 37 further comprising a ligase.

39. The kit of claim 38 wherein said ligase is a thermostable ligase.